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PATENT APPLICATION

ATTORNEY DOCKET NO. 10012346-1

IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Robert E. Haines

Confirmation No.: 1632

Application No.: 10/015,097

Examiner: El Hadji M. Sall

Filing Date: October 29, 2001

Group Art Unit: 2167

Title: DYNAMIC MAPPING OF WIRELESS NETWORK DEVICES

Mail Stop Appeal Brief-Patents
Commissioner For Patents
PO Box 1460
Alexandria, VA 22313-1450

TRANSMITTAL OF APPEAL BRIEF

Transmitted herewith is the Appeal Brief in this application with respect to the Notice of Appeal filed on January 10, 2008.

The fee for filing this Appeal Brief is (37 CFR 1.17(c)) \$520.00.

(complete (a) or (b) as applicable)

The proceedings herein are for a patent application and the provisions of 37 CFR 1.136(a) apply.

- ☐ (a) Applicant petitions for an extension of time under 37 CFR 1.136 (fees: 37 CFR 1.17(a)-(d)) for the total number of months checked below:

☐ 1st Month
\$120

☐ 2nd Month
\$460

☐ 3rd Month
\$1050

☐ 4th Month
\$1840

- ☐ The extension fee has already been filed in this application.

- ☒ (b) Applicant believes that no extension of time is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.

Please charge to Deposit Account 08-2025 the sum of \$ 520. At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account 08-2025 pursuant to 37 CFR 1.25. Additionally please charge any fees to Deposit Account 08-2025 under 37 CFR 1.16 through 1.21 inclusive, and any other sections in Title 37 of the Code of Federal Regulations that may regulate fees.

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Rev 10/08 (AppBrief)

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First Named Inventor	Robert E. Haines	APPEAL BRIEF
Serial No.	10/015,097	
Filing Date	October 29, 2001	
Group Art Unit	2157	
Examiner Name	El Hadji M. Sall	
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I. Introduction

Appellant filed a Notice of Appeal to the Board of Patent Appeals and Interferences on January 10, 2008. One copy of this Appeal Brief is hereby filed, in accordance with 37 C.F.R. § 41.37(a)(1), and is accompanied with a authorization to charge Deposit Account No. 08-2025 in the amount of \$500.00 for the fee as required under 37 C.F.R. § 41.20(b)(2).

II. Real Party in Interest

The present application has been assigned to Hewlett-Packard Development Company, L.P., a Texas Limited Partnership having its principal place of business at 20555 SH 249, Houston, TX 77070 (hereinafter "HPDC"), in an assignment recorded on September 30, 2003, at Reel 014061, Frame 0492. HPDC is a Texas limited partnership and is a wholly-owned affiliate of Hewlett-Packard Company, a Delaware Corporation, headquartered in Palo Alto, CA. The general or managing partner of HPDC is HPQ Holdings, LLC.

III. Related Appeals and Interferences

There are no other appeals or interferences known to Appellant that will have a bearing on the Board's decision in the present Appeal.

IV. Status of Claims

Claims 1-4 and 6-14 are pending in the application. Claims 5 and 15-20 were previously cancelled. Claim 1 is the subject of this Appeal. The remaining dependent claims are not separately argued under the provisions of 37 CFR 41.37(c)(1)(vii).

In the Final Office Action mailed September 5, 2007, claims 1-4 and 6-14 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kuehnel (U.S. Patent No.

5,787,077) in view of Jiang (U.S. Patent No. 6,741,853). The Advisory Action mailed December 11, 2007, maintained the rejections of the Final Office Action.

See Appendix A for claim 1 involved in this Appeal.

V. Status of Amendments

All amendments to the claims have been entered.

VI. Summary of Claimed Subject Matter

The present claims are directed to the presentation of dynamic mapping information to a user in a wireless network. The mapping information may be physical network mapping or it may be physical network mapping combined with logical network mapping. The physical network mapping can provide information regarding the location of a service-providing device relative to a service-requesting device. Dynamic mapping information accommodates mobile or other transient devices of the wireless network, and especially user devices, facilitating location or identification of a desired service-providing device in an unfamiliar network or surrounding. Elements pertinent to the issues on appeal are shown throughout the specification and in particular in paragraphs 0044-0047 with reference to Figure 7, and paragraphs 0052-0055 with reference to Figure 9.

The subject matter defined in claim 1 involved in this appeal includes a dynamic map 705 of a wireless network. The map 705 includes representations of a plurality of network devices 720/760 depicting locations of the network devices 720/760 relative to a reference point. Specification, paragraph 0044 and Figure 7. The locations of the representations are adapted for updating in response to changes in mapping information contained on a computer-usable medium of one of the network devices 720/760 without the need for manual intervention. Specification, paragraph 0045. The map 705 further includes a representation of a first network device 760 of the plurality of network devices that is requesting a service on the wireless network and a representation of a second

network device of the plurality of network devices 720f that is capable of providing the requested service. Specification, paragraph 0046. The representation of the first network device 760 is highlighted to differentiate it from representations of other network devices 720a-720g and the representation of the second network device 720f is highlighted to differentiate it from representations of other network devices 720a/720c/720d/720e that are incapable of providing the requested service. Specification, paragraph 0047 and Figure 7. The representations comprise visual, audible and/or tactile indicators and the representations provide an indication of at least a relative distance between their respective network device and the reference point. Specification, paragraphs 0048 and 0055.

VII. Grounds of Rejection to be Reviewed on Appeal

- Whether claim 1 is unpatentable under 35 U.S.C. § 103(a) over Kuehnelt (U.S. Patent No. 5,787,077) in view of Jiang (U.S. Patent No. 6,741,853).

VIII. Argument

A. Applicable Authorities

I. 35 U.S.C. § 103

35 U.S.C. § 103(a) provides in relevant part:

Conditions for patentability; non-obvious subject matter.

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art

to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

"The ultimate determination ... whether an invention is or is not obvious is a legal conclusion based on underlying factual inquiries including: (1) the scope and content of the prior art; (2) the level of ordinary skill in the prior art; (3) the differences between the claimed invention and the prior art; and (4) objective evidence of nonobviousness." *In re Dembiczak*, 175 F.3d 994, 998, 50 USPQ2d 1614, 1616 (1999) (citing *Graham v. John Deere Co.*, 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966)). *See also*, *KSR Intl. Co. v. Teleflex Inc.*, 550 U.S. ___, 82 USPQ2d 1385, 1391 (2007) (noting that the *Graham* factors remain the controlling inquiries in any obviousness analysis).

When applying 35 U.S.C. §103, the claimed invention must be considered as a whole; the references must be considered as a whole and must suggest the desirability and thus the obviousness of making the combination; the references must be viewed without the benefit of impermissible hindsight vision afforded by the claimed invention and a reasonable expectation of success is the standard with which obviousness is determined. *Hodosh v. Block Drug Co., Inc.*, 786 F.2d 1136, 1143 n.5, 229 USPQ 182, 187 n.5 (Fed. Cir. 1986).

To establish a *prima facie* case of obviousness, three basic criteria must be met: (1) There must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings; (2) There must be a reasonable expectation of success; (3) The prior art references must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicants' disclosure. *In re Vaack*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). *But see*, *KSR Intl. Co. v. Teleflex Inc.*, 550 U.S. ___, 82 USPQ2d 1385, 1391 (2007) (cautioning against the rigid application of a teaching/suggestion/motivation rule).

2. Definition of Claim Terms

Where an explicit definition is provided by the applicant for a term, that definition will control interpretation of the term as it is used in the claim. *Toro Co. v. White Consolidated Industries Inc.*, 199 F.3d 1295, 1301, 53 USPQ2d 1065, 1069 (Fed. Cir. 1999).

B. Analysis

1. Dynamic Maps

Appellant is claiming dynamic maps of wireless networks utilizing dynamic mapping information. Appellant has expressly defined mapping information to be physical network mapping or physical network mapping combined with logical network mapping. Specification, paragraph 0005. Physical network mapping can provide information regarding the location of a service-providing device relative to a service-requesting device. Dynamic mapping information accommodates mobile or other transient devices of the wireless network, and especially user devices, facilitating location or identification of a desired service-providing device in an unfamiliar network or surrounding. *Id.*

Where an explicit definition is provided by the applicant for a term, that definition will control interpretation of the term as it is used in the claim. *Toro Co. v. White Consolidated Industries Inc.*, 199 F.3d 1295, 1301, 53 USPQ2d 1065, 1069 (Fed. Cir. 1999). Appellant thus contends that to read on claim 1, the cited references must provide physical network mapping in a form that is useful, concrete and tangible. This contention is further supported by elements of claim 1 as to relative distance between a network device and a reference point, i.e., a distinctly physical characteristic.

2. Interpretation of the Kuehnel et al. Reference

Appellant contends that there is clear error in the Examiner's interpretation of the primary reference (U.S. Patent No. 5,787,077 to Kuehnel et al.) as used in support of the

rejection. In particular, the Examiner's interpretation of the Kuehnel et al. reference equates ATM cells with network devices. *See, e.g.*, Advisory Action, Continuation Sheet, section A. However, Kuehnel et al. clearly defines that ATM cells are communication packets transmitted by network devices, and not the devices themselves. Kuehnel et al., column 1, lines 39-44 and Figure 1 ("An ATM cell (as the smallest information unit) includes a header field (5 bytes or octets) and a payload field (48 bytes or octets). As shown in FIG. 1, the ATM cell header contains, among other information, the VP and VC identifier(s) used for addressing inside the network (i.e., for routing the information to an intended destination)."). *See, also*, Kuehnel et al., column 10, lines 14-17 ("At the mapping unit 34 of access point 21, ATM cells transmitted by the mobile terminals are mapped . . ."). The Examiner has provided no reasoned statement as to how the mapping of communication packets into a communication path can depict locations of network devices relative to a reference point and provide an indication of a relative distance between the network devices and the reference point as required in Appellant's claim 1.

Appellant contends that the mapping of ATM cells has no bearing on the mapping of their corresponding network devices because the ATM cells are not a function nor a result of the location of the device creating and transmitting the ATM cell. Accordingly, Appellant contends that the rejection must fail as there is no reasonable basis for the interpretation of the Kuehnel et al. reference as used in support of the rejection.

3. Rejection Under 35 U.S.C. § 103(a)

Claim 1 recites that its dynamic map include representations of a plurality of network devices depicting locations of the network devices relative to a reference point, wherein the representations provide an indication of at least a relative distance between their respective network device and the reference point. Even if Kuehnel et al. could be read to map locations of communication packets, which Appellant contends is nonsensical with regard to communication packets as information can have no defined physical location, there is no reasoned statement as to how the mapping of locations of communication packets would teach or suggest mapping of locations of the network

devices wirelessly transmitting those packets. The mapping of ATM cells clearly has no bearing on the mapping of their corresponding network devices because the ATM cells are not a function nor a result of the location of the device creating and transmitting the ATM cell. Appellant thus contends that the Examiner's assertion that location of devices is taught through the mapping of ATM cells is without basis, and that the Examiner has failed to make a *prima facie* case of obviousness. Appellant notes that the secondary reference of Jiang et al. is not asserted to address this element of claim 1, such that even if combination were proper, the combination would also fail to teach or suggest this element.

Claim 1 further recites that the locations of the representations are adapted for updating in response to changes in mapping information contained on a computer-usable medium of one of the network devices without the need for manual intervention. Yet there is no indication, teaching or suggestion in the cited references as to how the locations of device representations can be adapted for updating in response to changes in mapping information or otherwise. In fact, Kuehnel et al. expressly states that its virtual path, and thus its mapping information, is fixed while a mobile terminal is associated with an access point. Kuehnel et al., Abstract ("The Virtual Path identifier (VPI) used on the fixed link is selected based on the RCI assigned by the access point. The radio connection identifier RCI remains unchanged as long as the mobile terminal is associated with that access point."). Thus, regardless of where Kuehnel et al.'s mobile terminal moves within the geographical area covered by an access point, the associated virtual path for its communication packets will remain unchanged. Because Kuehnel et al.'s mapping information remains unchanged while its network devices are changing locations, Appellant contends that Kuehnel et al. expressly teaches away from this element of claim 1. Appellant notes that the secondary reference of Jiang et al. is not asserted to address this element of claim 1, such that even if combination were proper, the combination would also expressly teach away from this element.

Claim 1 further recites that its dynamic map include "a representation of a first network device of the plurality of network devices that is requesting a service on the wireless network," "a representation of a second network device of the plurality of

network devices that is capable of providing the requested service," "wherein the representation of the first network device is highlighted to differentiate it from representations of other network devices," and "wherein the representation of the second network device is highlighted to differentiate it from representations of other network devices that are incapable of providing the requested service." The Final Office Action mailed September 5, 2007 admits that Kuehnel et al. fails to teach these limitations, but cites the secondary reference of Jiang et al. to overcome the admitted deficiencies of the primary reference. *See*, Final Office Action, page 3, last paragraph.

The Examiner cites Jiang et al., column 21, lines 23-26 as showing a representation of a first network device of the plurality of network devices that is requesting a service on the wireless network. Final Office Action, page 4, first paragraph. However, Appellant notes that the cited section only discusses a process of receiving an information request and does not teach or suggest a visual, audible and/or tactile indicator of the device making a request.

The Examiner cites Jiang et al., column 21, lines 16-19 as showing a representation of a second network device of the plurality of network devices that is capable of providing the requested service. Final Office Action, page 4, second paragraph. However, Appellant notes that the cited section only discusses a method of providing information and does not teach or suggest a visual, audible and/or tactile indicator of the device providing the information.

The Examiner cites Jiang et al., column 5, lines 36-40 as showing that the representation of the first network device is highlighted to differentiate it from representations of other network devices. Final Office Action, page 4, third paragraph. However, Appellant notes that the cited section only discusses methods to determine the type of the user's device and format the requested information accordingly, and to detect the device type, adapt the content for the intended device and deliver the information. Appellant contends that the cited section, and the cited reference as a whole, fail to teach or suggest that a visual, audible and/or tactile indicator is highlighted to differentiate one

representation of a network device from visual, audible and/or tactile indicators representing other network devices.

The Examiner cites Jiang et al., column 7, line 64 through column 8, line 7 as showing that the representation of the second network device is highlighted to differentiate it from representations of other network devices that are incapable of providing the requested service. Final Office Action, page 4, fourth paragraph. However, Appellant notes that the cited section only discusses a network architecture. Appellant contends that the cited section, and the cited reference as a whole, fail to teach or suggest that a visual, audible and/or tactile indicator is highlighted to differentiate one representation of a network device from visual, audible and/or tactile indicators representing other network devices that are incapable of providing a requested service.

In view of the foregoing, Appellant contends that the primary reference of Kuehnel et al. and the secondary reference of Jiang et al., taken either alone or in combination, fail to teach or suggest each and every element of Appellant's claim 1 in that they do not purport to concern dynamic mapping of a wireless network comprising representations of a plurality of network devices depicting locations of the network devices relative to a reference point as recited in claim 1. The Examiner has failed to make a *prima facie* case of obviousness because several of the assertions upon which the Examiner relies in support of rejection have been shown to be in error. In addition, because the secondary reference of Jiang et al. fails to teach or suggest limitations that the Office admits to be missing from the primary reference of Kuehnel et al., Appellant contends that the rejection under 35 U.S.C. § 103(a) must fail on this basis as well.

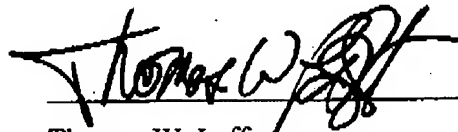
IX. Conclusion

For at least the reasons discussed above, Appellant submits that claim 1 is patentable over the cited references. Accordingly, Appellant requests that the Board of Appeals reverse the Examiner's decision regarding claim 1.

Respectfully submitted,

Date:

6 MAR 08



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APPENDIX A**Claims Appendix**

1. A dynamic map of a wireless network, comprising:
representations of a plurality of network devices depicting locations of the
network devices relative to a reference point, wherein the locations of the
representations are adapted for updating in response to changes in
mapping information contained on a computer-usable medium of one of
the network devices without the need for manual intervention;
a representation of a first network device of the plurality of network devices that
is requesting a service on the wireless network; and
a representation of a second network device of the plurality of network devices
that is capable of providing the requested service;
wherein the representation of the first network device is highlighted to
differentiate it from representations of other network devices;
wherein the representation of the second network device is highlighted to
differentiate it from representations of other network devices that are
incapable of providing the requested service;
wherein the representations comprise visual, audible and/or tactile indicators; and
wherein the representations provide an indication of at least a relative distance
between their respective network device and the reference point.

APPENDIX B**Evidence Appendix**

There is no extrinsic evidence to be considered in this Appeal. Therefore, no evidence is presented in this Appendix.

APPENDIX C**Related Proceedings Appendix**

There are no related proceedings to be considered in this Appeal. Therefore, no such proceedings are identified in this Appendix.